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LCD TV

SERVICE MANUAL

CHASSIS : ML-012C

MODEL : RU-15LA61

CAUTION

BEFORE SERVICING THE CHASSIS,
READ THE SAFETY PRECAUTIONS IN THIS MANUAL.



SAFETY PRECAUTIONS

IMPORTANT SAFETY NOTICE

Many electrical and mechanical parts in this chassis have special safety-related characteristics. These parts are identified by Δ in the Schematic Diagram and Replacement Parts List.

It is essential that these special safety parts should be replaced with the same components as recommended in this manual to prevent X-RADIATION, Shock, Fire, or other Hazards.

Do not modify the original design without permission of manufacturer.

General Guidance

An **Isolation Transformer should always be used** during the servicing of a receiver whose chassis is not isolated from the AC power line. Use a transformer of adequate power rating as this protects the technician from accidents resulting in personal injury from electrical shocks.

It will also protect the receiver and its components from being damaged by accidental shorts of the circuitry that may be inadvertently introduced during the service operation.

If any fuse (or Fusible Resistor) in this TV receiver is blown, replace it with the specified.

When replacing a high wattage resistor (Oxide Metal Film Resistor, over 1W), keep the resistor 10mm away from PCB.

Keep wires away from high voltage or high temperature parts.

Due to high vacuum and large surface area of picture tube, extreme care should be used in **handling the Picture Tube**. Do not lift the Picture tube by its Neck.

Before returning the receiver to the customer,

always perform an **AC leakage current check** on the exposed metallic parts of the cabinet, such as antennas, terminals, etc., to be sure the set is safe to operate without damage of electrical shock.

Leakage Current Cold Check(Antenna Cold Check)

With the instrument AC plug removed from AC source, connect an electrical jumper across the two AC plug prongs. Place the AC switch in the on position, connect one lead of ohm-meter to the AC plug prongs tied together and touch other ohm-meter lead in turn to each exposed metallic parts such as antenna terminals, phone jacks, etc.

If the exposed metallic part has a return path to the chassis, the measured resistance should be between $1M\Omega$ and $5.2M\Omega$.

When the exposed metal has no return path to the chassis the reading must be infinite.

An other abnormality exists that must be corrected before the receiver is returned to the customer.

Leakage Current Hot Check (See below Figure)

Plug the AC cord directly into the AC outlet.

Do not use a line Isolation Transformer during this check.

Connect 1.5K/10watt resistor in parallel with a 0.15uF capacitor between a known good earth ground (Water Pipe, Conduit, etc.) and the exposed metallic parts.

Measure the AC voltage across the resistor using AC voltmeter with 1000 ohms/volt or more sensitivity.

Reverse plug the AC cord into the AC outlet and repeat AC voltage measurements for each exposed metallic part. Any voltage measured must not exceed 0.75 volt RMS which corresponds to 0.5mA.

In case any measurement is out of the limits specified, there is possibility of shock hazard and the set must be checked and repaired before it is returned to the customer.

Leakage Current Hot Check circuit

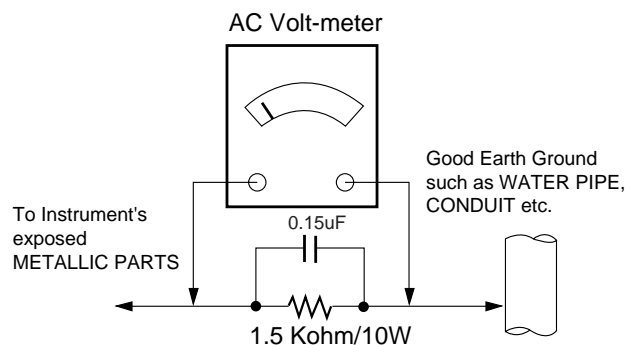


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SPECIFICATIONS

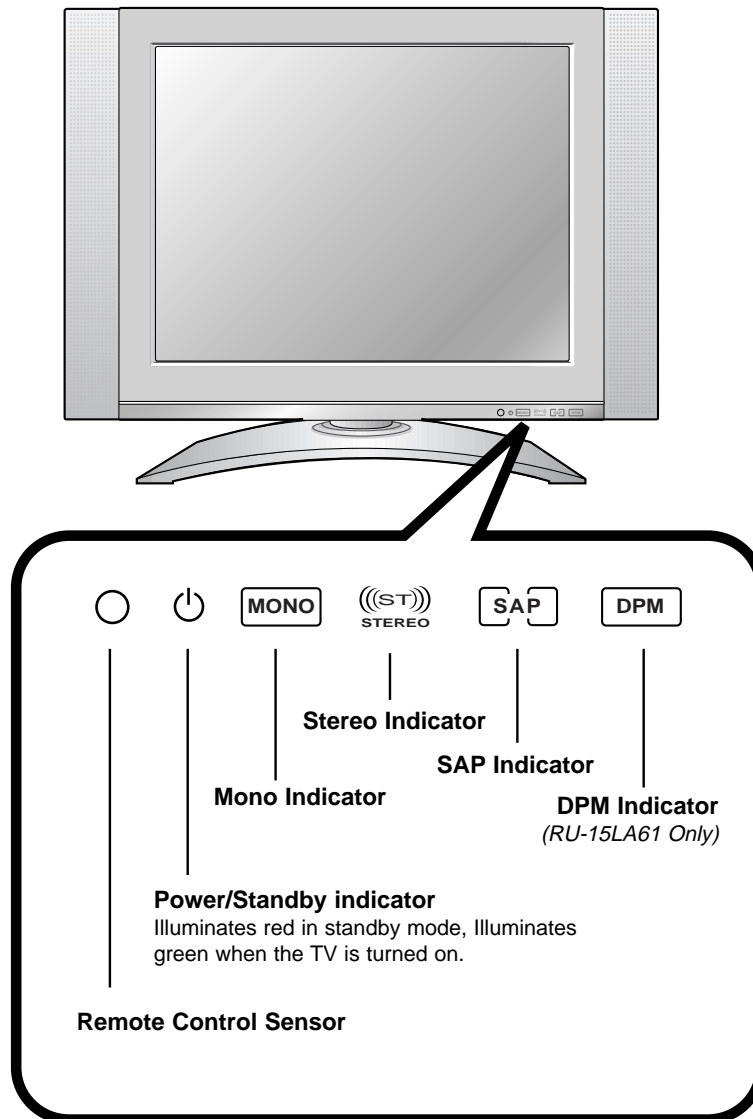
Model		RU-15LA61	RU-20LA61
Horizontal size (Inches)		18.3	22.8
Height (Inches)		14.8	18.3
Thickness (Inches)		6.7	8
Weight (pounds)		13.9	21.6
Power requirements		DC 12V/4.5A	DC 15V/4.5A
Television system		NTSC	
Television channels		VHF : 2 ~ 13, UHF : 14 ~ 69 Cable : 01 ~ 125	
Television Screen		LCD Panel	
External antenna impedance		75 Ω	
Power consumption		50 W	70 W
Audio output		3 W + 3 W	5 W + 5 W
Adapter (DC power)	In: AC 100-240V ~ 1.5A-0.6A 50/60Hz Out: DC 12V, 5A	In: AC 100-240V ~ 1.6A-0.7A 50/60Hz Out: DC 15V, 4.5A	
	* CAUTION : For use only with Model No. SAD6012SE AC Adapter, manufactured by H & E co., Ltd.	For use only with Model No. SAD7015SE AC Adapter, manufactured by H & E co., Ltd.	

Power supply cordset : Standard North America three wire earth-grounding with flexible cord SJT type or higher type.

* CAUTION : If replacement becomes necessary, replace with an exact duplicate.
Contact any LG authorized service center.

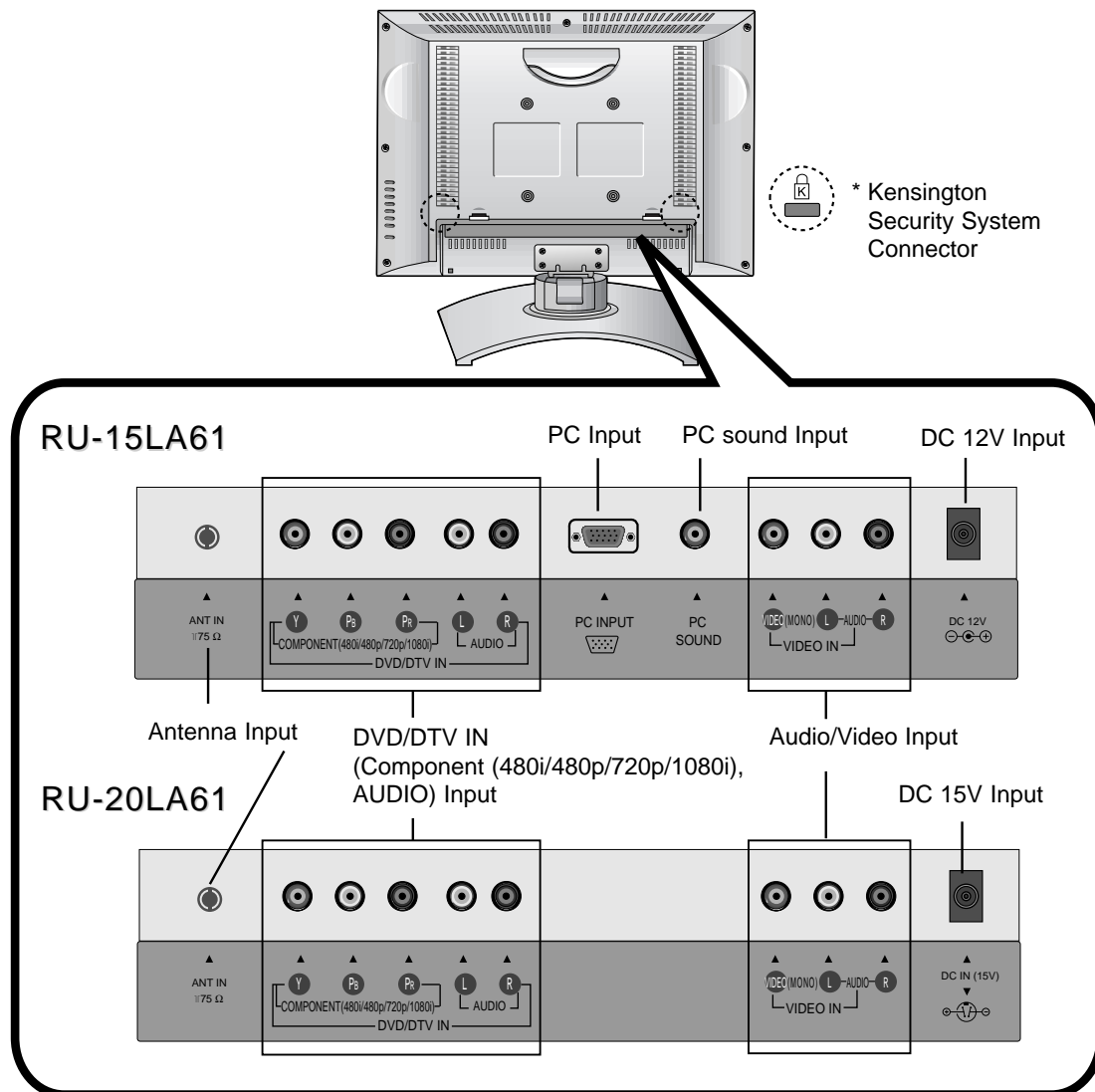
DESCRIPTION OF CONTROLS

Front of the TV



DESCRIPTION OF CONTROLS

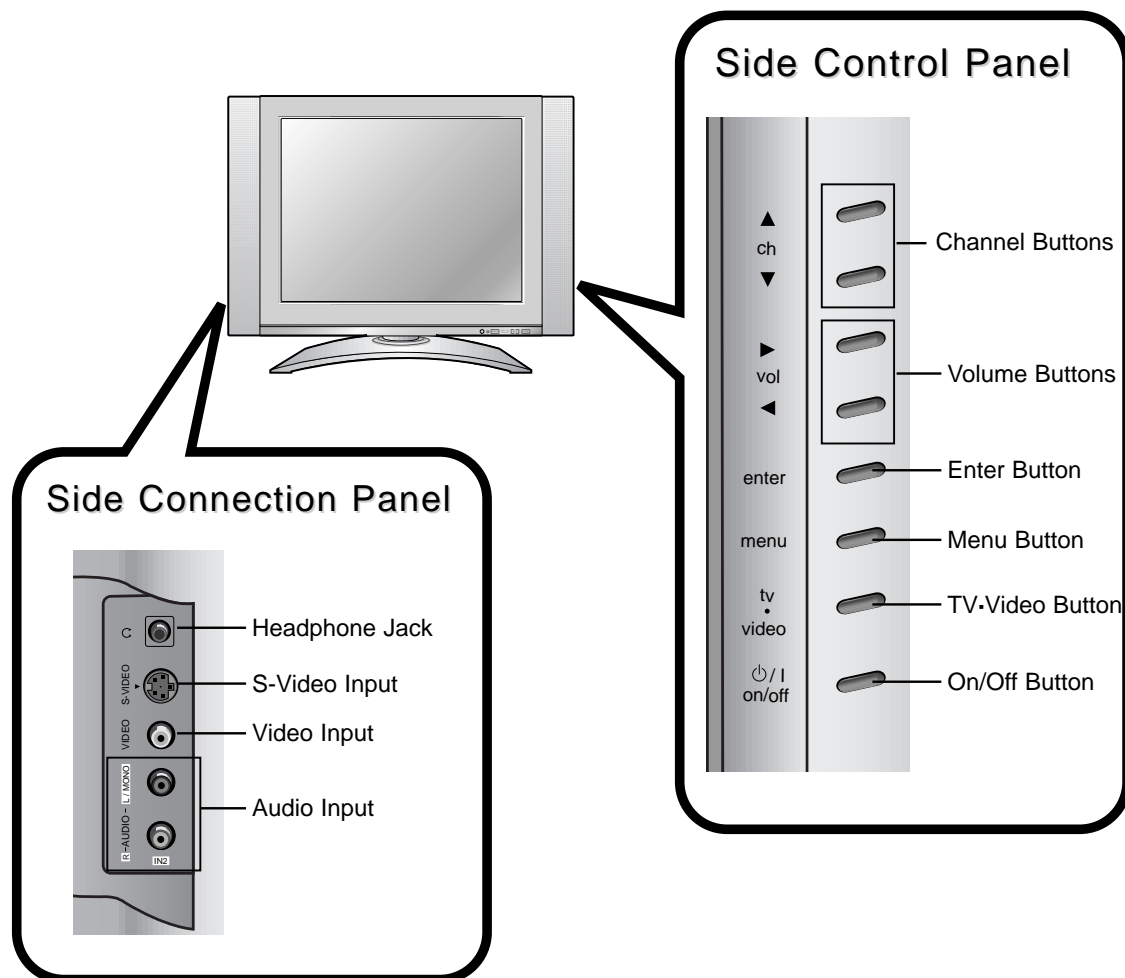
Back of the TV



- This manual mainly explains the features for the RU-15LA61

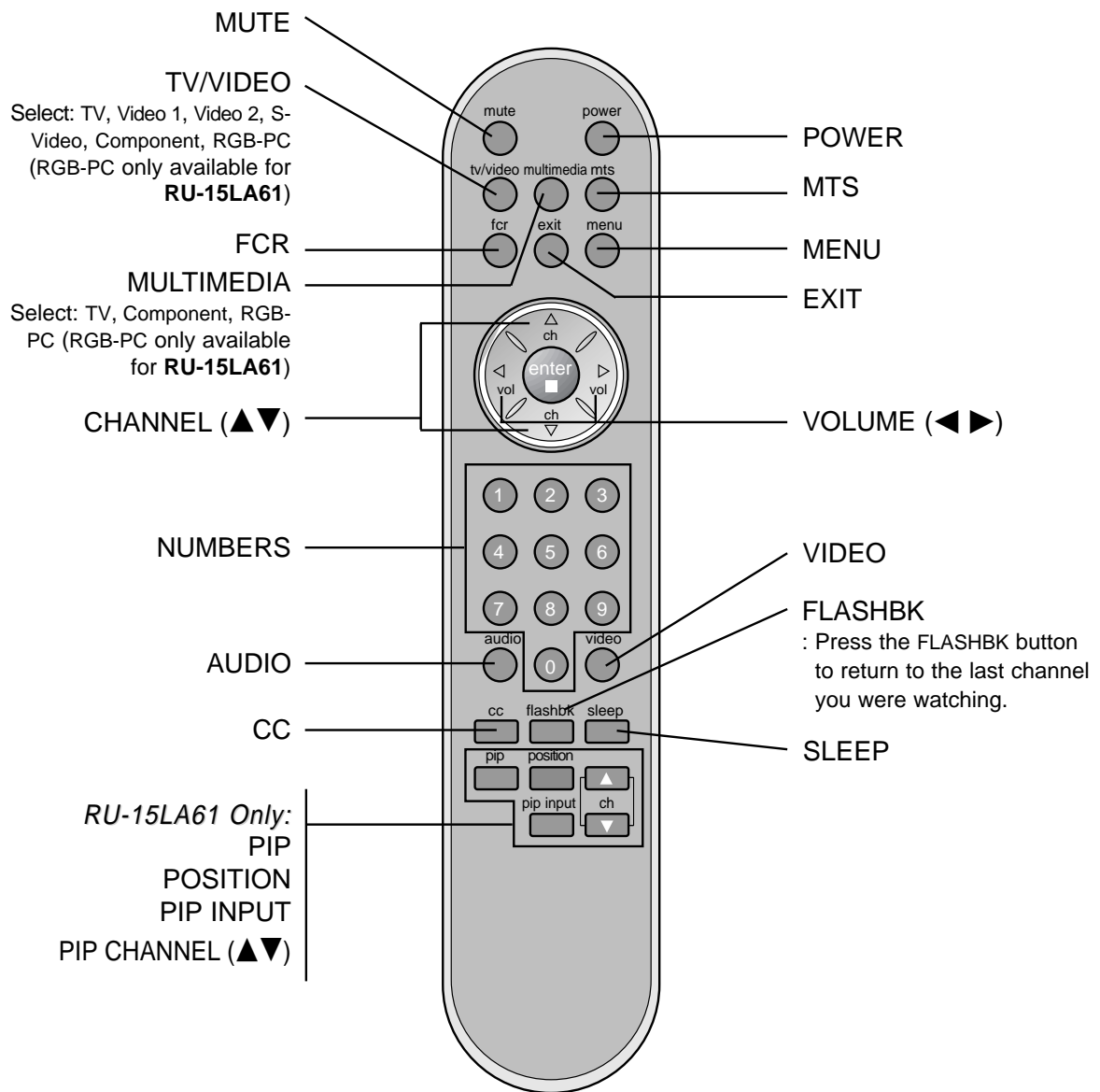
DESCRIPTION OF CONTROLS

Side of the TV



DESCRIPTION OF CONTROLS

Remote Control Buttons



ADJUSTMENT INSTRUCTION

1. Application Object

This instruction is for the application to the LCDTV, ML012C.

2. Notes

- (1) This set uses an adapter, so connect the adapter to the TV correctly before adjustment.
- (2) These adjustments must be performed in the correct sequence.
- (3) These adjustments must be performed at $25\pm5^{\circ}\text{C}$ of temperature and $65\pm10\%$ of relative humidity.
- (4) The input voltage of the receiver must be kept at 100~220V, 50/60Hz during adjustment.
- (5) The set must be operated for 30 minutes before adjustment. Heat Run must be performed with the full white signal or a TV noise signal.

3. Component Mode Adjustment

: Component Model only

3-1. Required Test Equipment

- (1) MSPG-925LTH, Pattern Generator for Digital TV 1080i mode Color-Bar signal output, Digital TV Set-Top Box
- (2) Remote controller for adjustment (SVC Remocon)

3-2. Preparation for Adjustment

- (1) Perform Heat Run for at least 30 minutes with a white pattern.
- (2) Connect the signal from a pattern generator to the LCD TV's component Input Jack.

3-3. YPbPr ADJUST Adjustment

- (1) Receive the Color Bar Pattern signal of Digital TV 1080i Mode from Pattern Generator.
- (2) Select the YPbPr ADJUST of the adjustment mode(SVC Menu Mode) by pressing the IN-START Key(or SVC Key) on the remote controller for adjustment(SVC).
- (3) Start the adjustment by pressing the ◀, ▶ Key(Volume Key) in the YPbPr ADJUST of the adjustment mode.
- (4) When adjustment is completed, "OK" will replace the "To Set" shown in the top/center of the OSD.

4. PC Input Mode Adjustment

: 15 Inch Model only

4-1. Required Test Equipment

- (1) 801GF(or VG819), Pattern generator with a Gray Pattern of 16(11) tones.
- (2) Remote controller for adjustment (SVC Remocon)

4-2. Preparation for Adjustment

- (1) Perform Heat Run for more than 30 minutes with a white pattern.
- (2) Connect the signal from a pattern generator to the LCD TV's PC Input Jack(D-Sub).

4-3. Auto Gray Adjustment

- (1) Apply the gray signal of XGA(1024X768) 16 tones(H: 31-214 Pattern, V: 60-84 Pattern) by using 801GF.
Or apply the gray signal by using VG819, Pattern generator with a Gray Pattern of 16(11) tones.
- (2) Select the adjustment mode(SVC Menu Mode) by pressing the ADJ Key(or SVC Key) on the remote controller for adjustment(SVC) and change the Auto gray from 0 to 1 using Volume + Key.

ADJUSTMENT INSTRUCTION

5. Position of Mode Adjustment

Timing of Mode Table

* H[dot]/V[line]

Mode	VGA-60	VGA-67	VGA-72	VGA-75	VGA-85	SVGA-56	SVGA-60	SVGA-72
H_total	800	864	832	840	832	1024	1056	1040
H_display	640	640	656	640	640	800	800	800
H_blanking	160	224	176	200	192	224	256	240
H_sync	96	64	40	64	56	72	128	120
H Polarity	NEG.	NEG.	NEG.	NEG.	NEG.	POS	POS	POS
H_bp	48	96	120	120	80	128	88	64
H_fp	16	64	16	16	56	24	40	56
H-freq[kHz]	31.469	35.0	37.861	37.5	43.269	35.156	37.879	48.077
/Clk[MHz]	25.175	30.24	31.5	31.5	36.0	36.0	40.0	50.0
V_total	525	525	520	500	509	625	628	666
V_display	480	480	496	480	480	600	600	600
V_blanking	45	45	24	20	29	25	28	66
V_sync	2	3	3	3	3	2	4	6
V Polarity	NEG	NEG	NEG	NEG	NEG	POS	POS	POS
V_bp	33	39	20	16	25	22	23	23
V_fp	10	3	1	1	1	1	1	37

Mode	SVGA-75	SVGA-85	XGA-60	XGA-70	XGA-75	MAC-75	XGA-85
H_total	1056	1048	1344	1328	1312	1152	1376
H_display	800	800	1024	1024	1024	832	1024
H_blanking	256	248	320	304	288	320	352
H_sync	80	64	136	136	96	64	96
H Polarity	POS	POS	NEG		POS	NEG	POS
H_bp	160	152	136	144	176	224	208
H_fp	16	32	160	24	16	32	48
H-freq[kHz]	46.875	53.674	48.363	56.476	60.023	49.725	68.677
/Clk[MHz]	49.5	56.25	65.0	75.0	78.75	57.283	84.997
V_total	625	631	806	806	800	667	808
V_display	600	600	768	768	768	624	768
V_blanking	25	31	38	38	32	43	40
V_sync	3	3	6	6	3	3	3
V Polarity	POS	POS	NEG	NEG	POS	NEG	POS
V_bp	21	27	29	29	28	39	36
V_fp	1	1	3	3	1	1	1

ADJUSTMENT INSTRUCTION

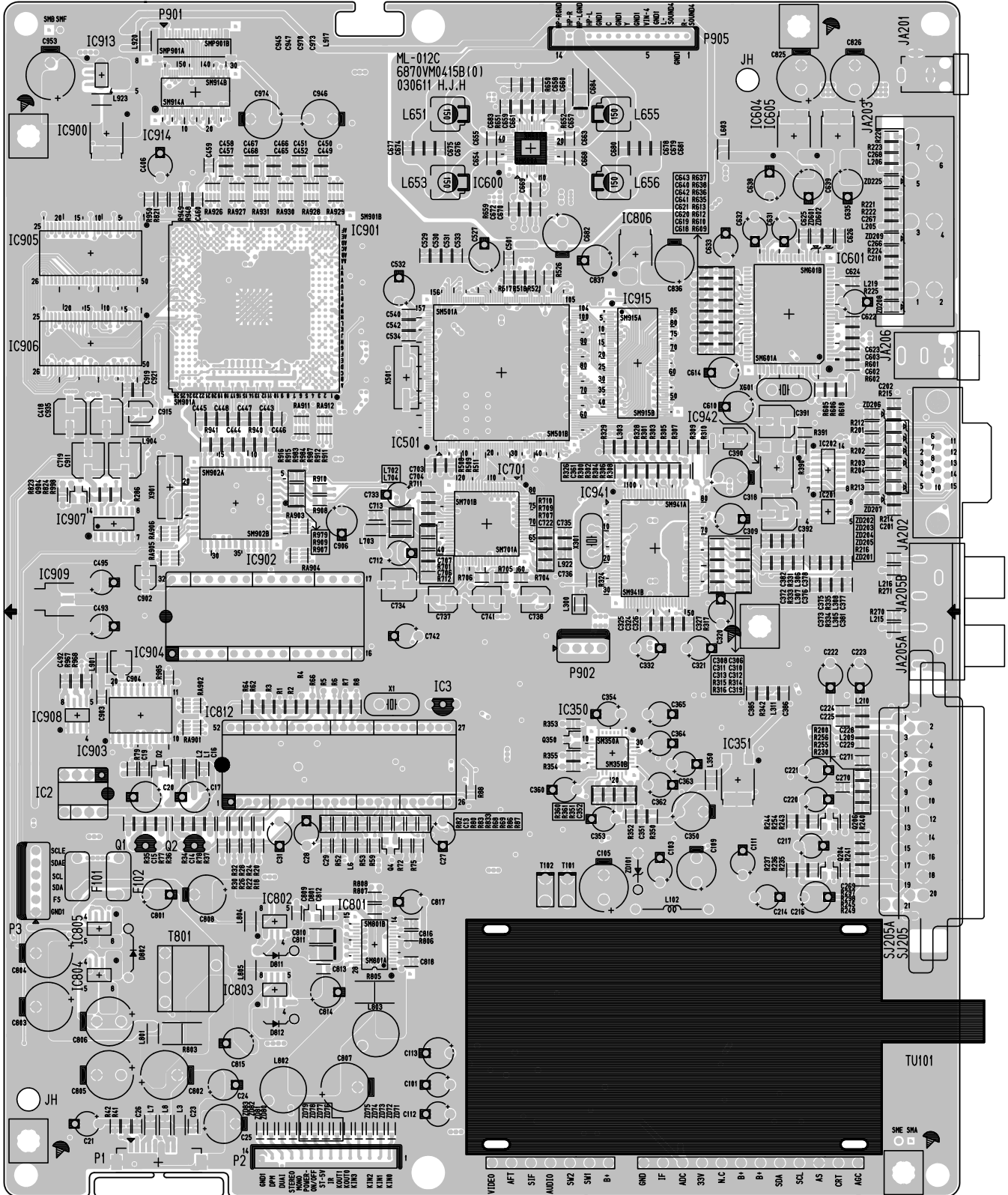
Mode	VGA350-70	VGA350-85	VGA400-70	VGA400-85
H_total	800	832	800	832
H_display	640	640	640	640
H_blanking	160	192	160	192
H_sync	96	64	96	64
H Polarity	POS	POG	NEG	NEG
H_bp	48	96	48	96
H_fp	16	32	16	32
H-freq[kHz]	31.468	37.86	31.46	37.86
/Clk[MHz]	25.17	31.47	25.17	31.5
V_total	449	445	449	445
V_display	350	350	400	400
V_blanking	99	95	49	45
V_sync	2	3	2	3
V Polarity	NEG	NEG	POS	POS
V_bp	60	60	35	41
V_fp	37	32	12	1

6. EDID(The Extended Display Identification Data):

	00	01	02	03	04	05	06	07	08	09	0A	0B	0C	0D	0E	0F
00	00	FF	FF	FF	FF	FF	FF	00	30	E5	D7	3A	01	00	00	00
10	00	0B	01	01	78	1F	17	70	E8	C3	A0	A3	54	4C	97	24
20	14	50	54	BF	E8	80	31	59	3B	D9	45	59	61	59	71	59
30	81	40	81	80	01	01	10	0E	01	01	01	01	01	01	01	01
40	01	01	01	01	01	01	01	01	F9	15	01	01	01	01	01	01
50	01	01	01	01	01	01	01	01	01	01	64	19	00	40	41	00
60	26	30	18	88	36	00	0E	C3	10	00	00	1E	00	00	00	FD
70	00	32	55	1E	46	0D	00	0A	20	20	20	20	20	20	00	C8

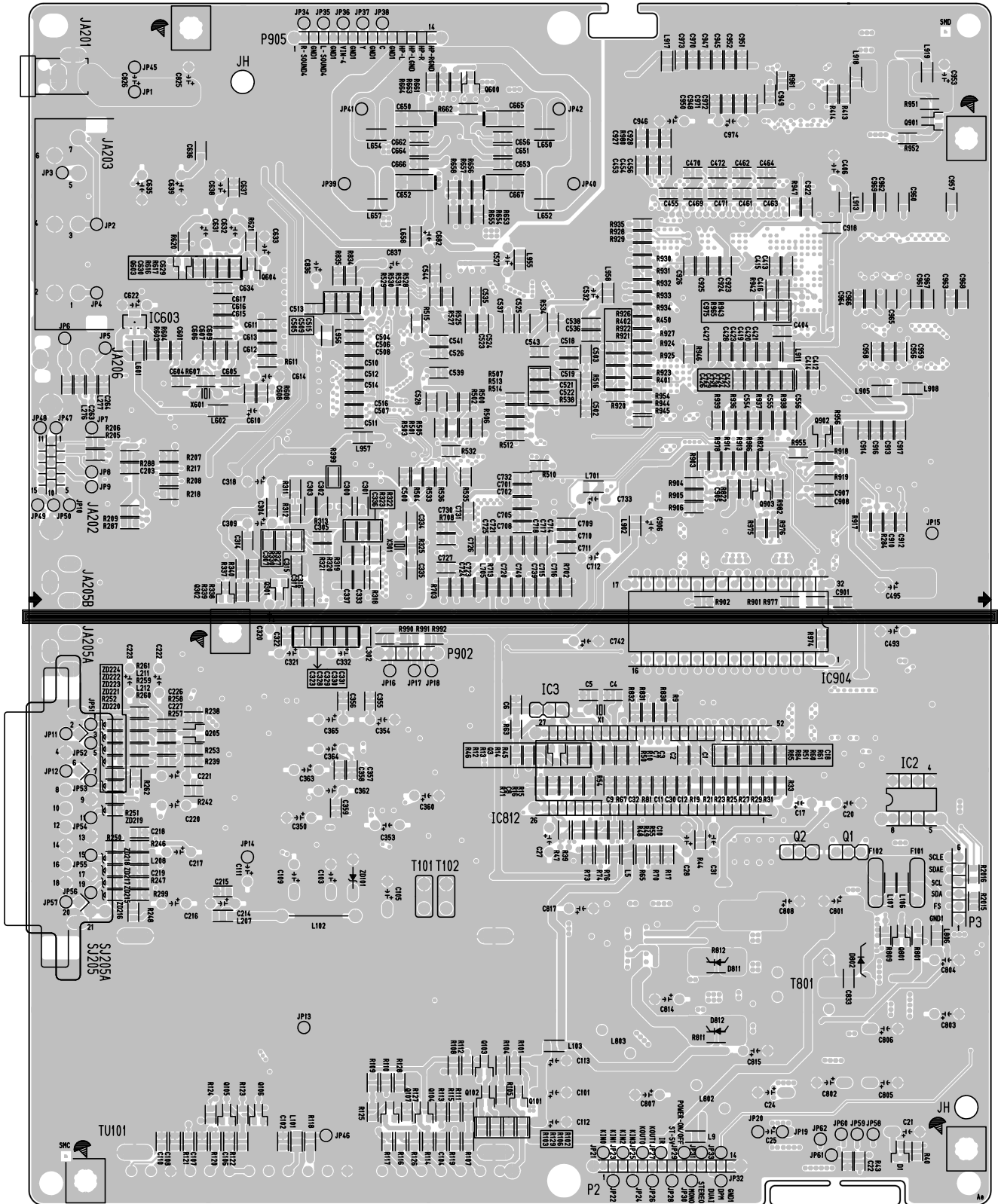
PRINTED CIRCUIT BOARD

MAIN(TOP)

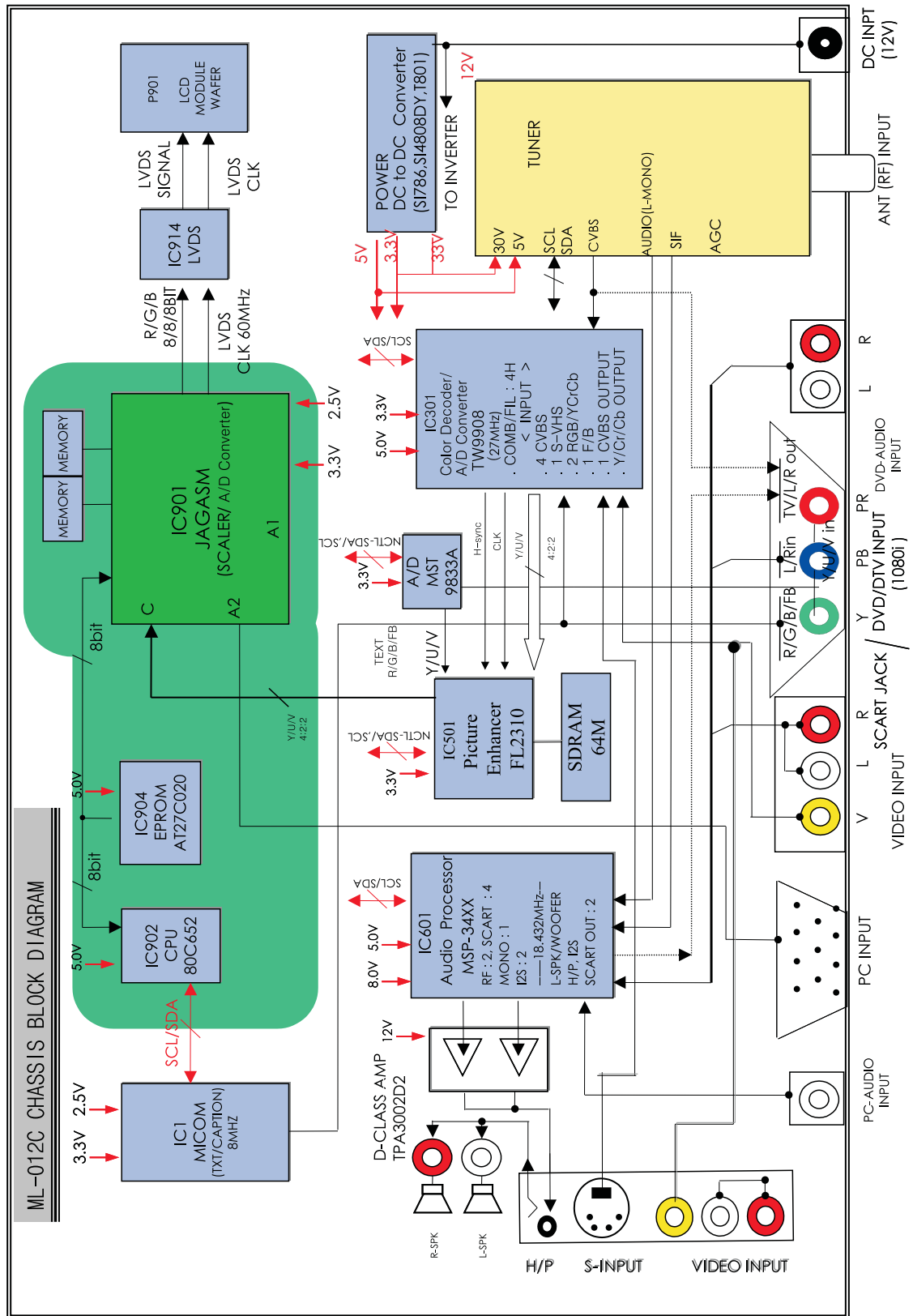


PRINTED CIRCUIT BOARD

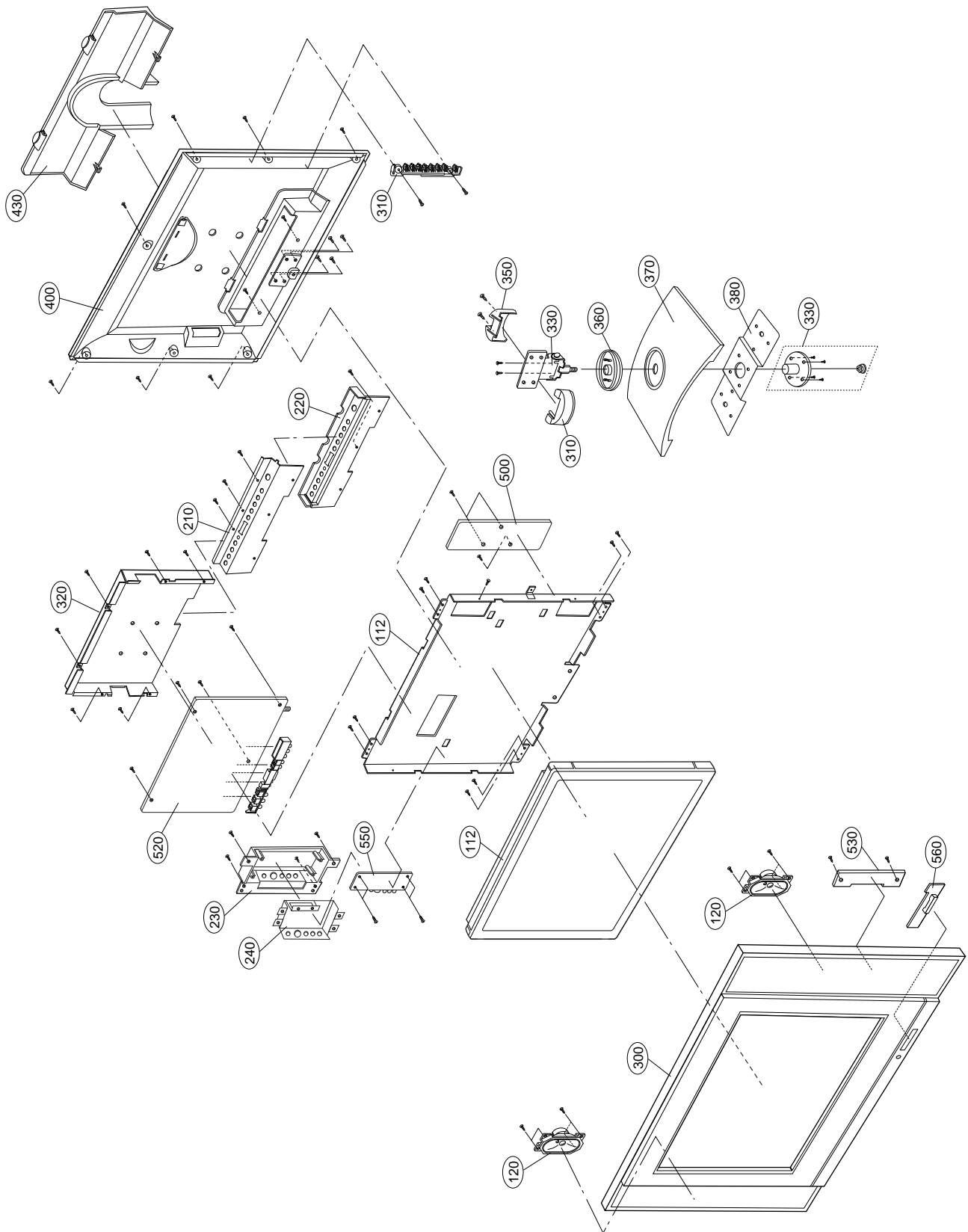
MAIN(BOTTOM)



BLOCK DIAGRAM



EXPLODED VIEW



EXPLODED VIEW PARTS LIST

No.	PART NO.	DESCRIPTION
112	6306V15001A	LCD MODULE,LC150X01-A3 IPS LG PHILPS TFT COLOR XGA
120	6400GKTX01A	SPEAKER,FULLRANGE F1527C-6428 (GENERAL) 8OHM 7/12W 83DB
210	4950V00141B	METAL,SHIELD NON REAR AV 15LA60
220	4810V00764G	BRACKET,REAR AV RU-15LA61 ML012C HIPS 40AF
230	4810V00765F	BRACKET,SIDE AV RU-15LA61 ML012C HIPS 40AF
240	4950V00142A	METAL,SHIELD NON SIDE AV, 20LA60/15LA60
250	4950V00134A	METAL,MAIN FRAME NON 15LA60
300	3091V00490E	CABINET ASSEMBLY,RU-15LA61 STEREO ML012C FOR CANADA
	3091V00490K	CABINET ASSEMBLY,RU-15LA61.AAPLKZ
310	5020V00777C	BUTTON,CONTROL RU-15LA61 ABS, HF-380 8KEY
320	4950V00140A	METAL,SHIELD NON 15LA60
330	4950V00157A	METAL,STAND NON HINGE ASSY_15LA60
340	4810V00777D	BRACKET,STAND RU-15LA61 ML012C HIPS 60HR FRONT
350	4810V00778D	BRACKET,STAND RU-15LA61 ML012C HIPS 60HR REAR
360	4810V00776C	BRACKET,DECO RU-15LA61 ML012C ABS, HF-380
370	4810V00779C	BRACKET,STAND RU-15LA61 ML012C ABS, HF-380 BASE
380	4950V00135A	METAL,STAND NON BASE, 15LA60
400	3809V00338E	BACK COVER ASSEMBLY,RU-15LA61 NON
430	3550V00298C	COVER,REAR AV RU-15LA61 ABS, HF-380
520	6871VMMQ13A	PCB ASSEMBLY,MAIN ML012C RU-15LA60
530	6871VSMV38A	PCB ASSEMBLY,SUB CONT ML012B RZ-15/20LA60 CONTROL ASSY
540	6633VA0003N	INVERTER ASSEMBLY,12V NON ECT ALPS500 6633VA00003K
550	6871VSMV40J	PCB ASSEMBLY,SUB ML012B SIDE A/V RU-20LA61
560	6871VSMV43D	PCB ASSEMBLY,SUB ML012C 15INDEX LED ASSY(RU-15LA60)

REPLACEMENT PARTS LIST

For Capacitor & Resistors, the characters at 2nd and 3rd digit in the P/No. means as follows;

CC, CX, CK, CN : Ceramic
CQ : Polyester
CE : Electrolytic

RD : Carbon Film
RS : Metal Oxide Film
RN : Metal Film
RF : Fusible

RUN DATE : 2003.8.12

LOCA. NO	PART NO	DESCRIPTION
IC		
IC1	0IZZVC0063B	M37136EFSP DIP 52P ST ML012C
IC2	0IAL241610B	AT24C16A10PI2.7 8PIN
IC201	0IAL242110A	AT24C2110SI2.5 8P,SOP TP 1K
IC202	0IMCRFA022A	74F14SC 14P SCHMITT TRIGGER IC
IC3	0IFA752700A	KA75270Z 3 TP RESET IC
IC350	0ISO204000A	CXA2040AQ 32P IIC BUS VIDEO S/W
IC351	0IMCRFA010A	KA7809R 2P DPAK
IC501	0IMCRGN001B	FLI2310BC 208P DIGITAL VIDEO
IC600	0IMCRTI022C	TPA3002D2 48P QFP R/TP 7W SOUND AMP
IC601	0IMCRMN007A	MSP3421G QA B8 V3 80P VIRTUAL DOLBY
IC603	0IKE704200J	KIA7042AF SOT89 TP 4.2V VOLTAGE
IC604	0IMCRFA009A	KA78M08RTM 2P DPAK
IC605	0IMCRFA008A	KA78M05RTM 2P DPAK
IC701	0IMCRM3001A	MST9883A 80P A/D CONVERTER
IC801	0ITC786000A	SI786 28SSOP TP DUALOUTPUT POWER
IC806	0IMCRFA020A	RC1587DT_36 3P TO252 2.5V 3A
IC812	0IZZVC0063B	M37136EFSP DIP 52P ST ML012C
IC901	0IMCRG2004B	JAGASM A4 352BALL
IC902	0IPH806520A	80C652 40 PLCC ST 8BIT
IC903	0IPH743730E	74HCT373 D 20SOP ADDRESS LATCH
IC904	0IZZVC0062B	M27C512_10F1 DIP 32P ST ML012C
IC905	0ISS416162C	K4S161622ETC80 50TSOP
IC906	0ISS416162C	K4S161622ETC80 50TSOP
IC907	0IPH740400G	74HC04D 14P,SOP TP .
IC908	0IMCRAL006A	AT24C16AN10SI2.7 8P SOIC R/TP EEPROM
IC909	0IMCRSJ001B	SC15651ST2.5TR 2.5V 1.5A
IC909	0IMCRFA020A	RC1587DT_36 3P TO252 2.5V 3A
IC914	0IMCRTH001A	THC63LVDM83R 56P TRANSMITTER
IC915	0IMMRHY033A	HY57V643220C(L)T6 86P 64M
IC941	0IMCRTW002A	TW9908 100P VIDEO DECODER
IC942	0IMCRFA020A	RC1587DT_36 3P 2.5V 3A
TRANSISTOR		
IC802	0TFVI80001A	SI4808DY R/TP SO8 30V 7.5A OLD
IC803	0TFVI80001A	SI4808DY R/TP SO8 30V 7.5A OLD
IC804	0TFVI80005A	SI4963DY R/TP SO8 20V 6.2A
IC805	0TF492509AA	SI4925DY TP TEMIC 30V 6.1A SO8
IC913	0TF492509AA	SI4925DY TP TEMIC 30V 6.1A SO8
Q102	0TR387500AA	CHIP 2SC3875S(ALY) KEC
Q204	0TR387500AA	CHIP 2SC3875S(ALY) KEC
Q205	0TR387500AA	CHIP 2SC3875S(ALY) KEC
Q206	0TR387500AA	CHIP 2SC3875S(ALY) KEC
Q3	0TR387500AA	CHIP 2SC3875S(ALY) KEC
Q3000	0TR387500AA	CHIP 2SC3875S(ALY) KEC
Q3001	0TR387500AA	CHIP 2SC3875S(ALY) KEC
Q3002	0TR387500AA	CHIP 2SC3875S(ALY) KEC

LOCA. NO	PART NO	DESCRIPTION
Q3003	0TR387500AA	CHIP 2SC3875S(ALY) KEC
Q3004	0TR387500AA	CHIP 2SC3875S(ALY) KEC
Q3005	0TR387500AA	CHIP 2SC3875S(ALY) KEC
Q3006	0TR387500AA	CHIP 2SC3875S(ALY) KEC
Q301	0TR150400BA	CHIP 2SA1504S(ASY) KEC
Q350	0TR150400BA	CHIP 2SA1504S(ASY) KEC
Q801	0TR387500AA	CHIP 2SC3875S(ALY) KEC
Q901	0TR387500AA	CHIP 2SC3875S(ALY) KEC
Q902	0TR387500AA	CHIP 2SC3875S(ALY) KEC
Q903	0TR387500AA	CHIP 2SC3875S(ALY) KEC
Q904	0TR387500AA	CHIP 2SC3875S(ALY) KEC
DIODE		
D1	0DD181009AB	KDS181 TP KEC 85V 300MA
D2	0DD181009AB	KDS181 TP KEC 85V 300MA
D801	0DD181009AB	KDS181 TP KEC 85V 300MA
D802	0DD100009AM	EU1ZV(1) TP SANKEN
D811	0DD414809ED	1N4148 TP GRANDE
D812	0DD414809ED	1N4148 TP GRANDE
ZD101	0DZ330009BA	ZENERS,HZT33
ZD3000	0DZRM00178A	ZENERS,UDZS TE17 5.1B
ZD71	0DZRM00178A	ZENERS,UDZS TE17 5.1B
ZD72	0DZRM00178A	ZENERS,UDZS TE17 5.1B
ZD73	0DZRM00178A	ZENERS,UDZS TE17 5.1B
ZD74	0DZRM00178A	ZENERS,UDZS TE17 5.1B
ZD75	0DZRM00178A	ZENERS,UDZS TE17 5.1B
ZD76	0DZRM00178A	ZENERS,UDZS TE17 5.1B
ZD77	0DZRM00178A	ZENERS,UDZS TE17 5.1B
ZD79	0DZRM00178A	ZENERS,UDZS TE17 5.1B
ZD80	0DZRM00178A	ZENERS,UDZS TE17 5.1B
ZD81	0DZRM00178A	ZENERS,UDZS TE17 5.1B
ZD82	0DZRM00178A	ZENERS,UDZS TE17 5.1B
ZD83	0DZRM00178A	ZENERS,UDZS TE17 5.1B
CAPACITOR		
C101	0CE476DH618	47UF STD 25V 20%
C103	0CE106DK618	10UF STD 50V M
C105	0CE687DD618	680UF STD 10V 20%
C111	0CE105DK618	1UF STD 50V M
C113	0CE107DF618	100UF STD 16V M
C17	0CE107DF618	100UF STD 16V M
C20	0CE107DF618	100UF STD 16V M
C21	0CE106DF618	10UF STD 16V M
C214	0CE476DF618	47UF STD 16V M
C217	0CE476DD618	47UF STD 10V 20%
C220	0CE476DD618	47UF STD 10V 20%
C221	0CE476DD618	47UF STD 10V 20%
C2300	0CK105DF64A	1UF 2012 16V 20%

REPLACEMENT PARTS LIST

LOCA. NO	PART NO	DESCRIPTION	LOCA. NO	PART NO	DESCRIPTION
C2301	0CK105DF64A	1UF 2012 16V 20%	C670	0CK105DF64A	1UF 2012 16V 20%
C24	0CE107DF618	100UF STD 16V M	C672	0CK105DF64A	1UF 2012 16V 20%
C25	0CE227DF618	220UF STD 16V M	C676	0CK224DF56A	220000PF 2012 16V 10%
C309	0CE106DF618	10UF STD 16V M	C677	0CK224DF56A	220000PF 2012 16V 10%
C31	0CE105DK618	1UF STD 50V M	C680	0CK224DF56A	220000PF 2012 16V 10%
C318	0CE337DD618	330UF STD 10V M	C681	0CK224DF56A	220000PF 2012 16V 10%
C318	0CE107DD618	100UF STD 10V M	C682	0CE227DF618	220UF STD 16V M
C320	0CQ3331N509	0.033U 100V K	C683	0CK105DF64A	1UF 2012 16V 20%
C321	0CE106DF618	10UF STD 16V M	C712	0CE107SF6DC	100UF MVG 16V M
C332	0CE107DD618	100UF STD 10V M	C719	0CE107SF6DC	100UF MVG 16V M
C350	0CE227DF618	220UF STD 16V M	C733	0CE107DD618	100UF STD 10V M
C353	0CE476DF618	47UF STD 16V M	C734	0CE107SF6DC	100UF MVG 16V M
C354	0CE336DF618	33UF STD 16V M	C742	0CE107SF6DC	100UF MVG 16V M
C360	0CE105DK618	1UF STD 50V M	C742	0CE107DD618	100UF STD 10V M
C362	0CE474CK636	0.47UF SHL,SD 50V 20%	C801	0CE476DK618	47UF STD 50V M
C363	0CE474CK636	0.47UF SHL,SD 50V 20%	C802	0CE477DF618	470UF STD 16V 20%
C364	0CE474CK636	0.47UF SHL,SD 50V 20%	C803	0CE477DF618	470UF STD 16V 20%
C365	0CE474CK636	0.47UF SHL,SD 50V 20%	C804	0CE477DF618	470UF STD 16V 20%
C390	0CE106SF6DC	10UF MVG 16V 20%	C805	0CE477DF618	470UF STD 16V 20%
C391	0CE107SF6DC	100UF MVG 16V M	C806	0CE477DF618	470UF STD 16V 20%
C392	0CE107SF6DC	100UF MVG 16V M	C807	0CE477DF618	470UF STD 16V 20%
C406	0CE476DF618	47UF STD 16V M	C808	0CE227DH618	220UF STD 25V M
C418	0CE107SF6DC	100UF MVG 16V M	C814	0CE107DH618	100UF STD 25V M
C493	0CE106DF618	10UF STD 16V M	C815	0CE107DH618	100UF STD 25V M
C493	0CE476DF618	47UF STD 16V M	C817	0CE475DK618	4.7UF STD 50V 20%
C495	0CE107DF618	100UF STD 16V M	C825	0CE337DH618	330UF STD 25V M
C527	0CE107DF618	100UF STD 16V M	C826	0CE337DH618	330UF STD 25V M
C532	0CE107DF618	100UF STD 16V M	C836	0CE227DF618	220UF STD 16V M
C610	0CE107SF6DC	100UF MVG 16V M	C837	0CE227DD618	220UF STD 10V M
C614	0CE107DF618	100UF STD 16V M	C902	0CE106SF6DC	10UF MVG 16V 20%
C614	0CE107SF6DC	100UF MVG 16V M	C904	0CE106SF6DC	10UF MVG 16V 20%
C618	0CK224DF56A	220000PF 2012 16V 10%	C906	0CE107DF618	100UF STD 16V M
C619	0CK224DF56A	220000PF 2012 16V 10%	C911	0CE107SF6DC	100UF MVG 16V M
C620	0CK224DF56A	220000PF 2012 16V 10%	C915	0CE106SF6DC	10UF MVG 16V 20%
C621	0CK224DF56A	220000PF 2012 16V 10%	C935	0CE107SF6DC	100UF MVG 16V M
C622	0CE476DF618	47UF STD 16V M	C946	0CE476DF618	47UF STD 16V M
C631	0CE106DF618	10UF STD 16V M	C953	0CE477DF618	470UF STD 16V 20%
C632	0CE106DF618	10UF STD 16V M	C954	0CE477DF618	470UF STD 16V 20%
C633	0CE335DK618	3.3UF STD 50V 20%	C974	0CE476DF618	47UF STD 16V M
C635	0CE107DF618	100UF STD 16V M	JACK		
C638	0CE107DF618	100UF STD 16V M	JA2000	6613V00018A	JACK ASSEMBLY,PMJ026A (7PIN)
C639	0CE107DF618	100UF STD 16V M	JA201	6612VAH001A	JACK,PHONE HEC3900010110
C640	0CK224DF56A	220000PF 2012 16V 10%	JA203	6613V00004P	JACK ASSY,PJ6054P 3P
C641	0CK224DF56A	220000PF 2012 16V 10%	JA205A	380-336E	JACK,RCA WA6013E 1P
C642	0CK224DF56A	220000PF 2012 16V 10%	JA205B	380-336F	JACK,RCA WA6013E 1P
C643	0CK224DF56A	220000PF 2012 16V 10%	JA206	6612VCH003B	JACK,PHONE PEJ012C
C656	0CK105DF64A	1UF 2012 16V 20%	SJ205	6612VJH008D	JACK,RCA PJ6063D DVD IN 3P
C658	0CK105DF64A	1UF 2012 16V 20%	COIL & TRANSFORMER		
C659	0CK105DF64A	1UF 2012 16V 20%	L102	0LA0272K139	INDUCTOR,27UH K
C662	0CK105DF64A	1UF 2012 16V 20%			
C669	0CK105DF64A	1UF 2012 16V 20%			

REPLACEMENT PARTS LIST

LOCA. NO	PART NO	DESCRIPTION	LOCA. NO	PART NO	DESCRIPTION
L2105	0LA0472K119	INDUCTOR,47UH K	L2105	6210TCE001A	FILTER,EMC HB1S2012080JT
L2106	0LA0472K119	INDUCTOR,47UH K	L2106	6210TCE001A	FILTER,EMC HB1S2012080JT
L651	6140VR0005B	COIL,SLF7045T330MR82	L2107	6210TCE001A	FILTER,EMC HB1S2012080JT
L653	6140VR0005B	COIL,SLF7045T330MR82	L2108	6210TCE001G	FILTER,EMC HH1M3216501
L655	6140VR0005B	COIL,SLF7045T330MR82	L2109	6210TCE001G	FILTER,EMC HH1M3216501
L656	6140VR0005B	COIL,SLF7045T330MR82	L215	6210TCE001A	FILTER,EMC HB1S2012080JT
L802	6140VB0004B	COIL,CHOKE 26UH	L216	6210TCE001A	FILTER,EMC HB1S2012080JT
L803	6140VB0004A	COIL,CHOKE 9.5UH	L276	6210TCE001A	FILTER,EMC HB1S2012080JT
T801	6170VTCA30A	TRANSFORMER,SMPS[COIL] EPC 13Z 320UH	L277	6210TCE001A	FILTER,EMC HB1S2012080JT
RESISTOR			L3	6210TCE001G	FILTER,EMC HH1M3216501
R2002	ORD1200H609	120 OHM 1/2 W 5.00%	L300	6210TCE001A	FILTER,EMC HB1S2012080JT
R2003	ORD1200H609	120 OHM 1/2 W 5.00%	L301	6210TCE001G	FILTER,EMC HH1M3216501
R803	0RHZVTA001A	0.025 OHM 1W 2%	L302	6210TCE001A	FILTER,EMC HB1S2012080JT
R805	0RHZVTA001A	0.025 OHM 1W 2%	L350	6210TCE001G	FILTER,EMC HH1M3216501
RA901	0RRZVTA001A	MNR14E0AJ101 R OHM 100 OHM 5%	L601	6210TCE001G	FILTER,EMC HH1M3216501
RA902	0RRZVTA001A	MNR14E0AJ101 R OHM 100 OHM 5%	L602	6210TCE001G	FILTER,EMC HH1M3216501
RA903	0RRZVTA001A	MNR14E0AJ101 R OHM 100 OHM 5%	L603	6210TCE001G	FILTER,EMC HH1M3216501
RA904	0RRZVTA001A	MNR14E0AJ101 R OHM 100 OHM 5%	L658	6210TCE001G	FILTER,EMC HH1M3216501
RA905	0RRZVTA001A	MNR14E0AJ101 R OHM 100 OHM 5%	L7	6210TCE001G	FILTER,EMC HH1M3216501
RA906	0RRZVTA001A	MNR14E0AJ101 R OHM 100 OHM 5%	L701	6210TCE001G	FILTER,EMC HH1M3216501
RA911	0RRZVTA001A	MNR14E0AJ101 R OHM 100 OHM 5%	L702	6210TCE001G	FILTER,EMC HH1M3216501
RA912	0RRZVTA001A	MNR14E0AJ101 R OHM 100 OHM 5%	L703	6210TCE001G	FILTER,EMC HH1M3216501
RA926	0RRZVTA001A	MNR14E0AJ101 R OHM 100 OHM 5%	L704	6210TCE001G	FILTER,EMC HH1M3216501
RA927	0RRZVTA001A	MNR14E0AJ101 R OHM 100 OHM 5%	L8	6210TCE001G	FILTER,EMC HH1M3216501
RA928	0RRZVTA001A	MNR14E0AJ101 R OHM 100 OHM 5%	L801	6210TCE001G	FILTER,EMC HH1M3216501
RA929	0RRZVTA001A	MNR14E0AJ101 R OHM 100 OHM 5%	L804	6210TCE001G	FILTER,EMC HH1M3216501
RA930	0RRZVTA001A	MNR14E0AJ101 R OHM 100 OHM 5%	L805	6210TCE001G	FILTER,EMC HH1M3216501
RA931	0RRZVTA001A	MNR14E0AJ101 R OHM 100 OHM 5%	L806	6210TCE001G	FILTER,EMC HH1M3216501
SWITCH			L901	6210TCE001G	FILTER,EMC HH1M3216501
SW1101	140-313B	SWITCH,TACT 2LEAD 160G(TA)	L902	6210TCE001G	FILTER,EMC HH1M3216501
SW1102	140-313B	SWITCH,TACT 2LEAD 160G(TA)	L904	6210TCE001G	FILTER,EMC HH1M3216501
SW1103	140-313B	SWITCH,TACT 2LEAD 160G(TA)	L905	6210TCE001G	FILTER,EMC HH1M3216501
SW1104	140-313B	SWITCH,TACT 2LEAD 160G(TA)	L908	6210TCE001G	FILTER,EMC HH1M3216501
SW1105	140-313B	SWITCH,TACT 2LEAD 160G(TA)	L911	6210TCE001G	FILTER,EMC HH1M3216501
SW1106	140-313B	SWITCH,TACT 2LEAD 160G(TA)	L913	6210TCE001G	FILTER,EMC HH1M3216501
SW1107	140-313B	SWITCH,TACT 2LEAD 160G(TA)	L917	6210TCE001G	FILTER,EMC HH1M3216501
SW1108	140-313B	SWITCH,TACT 2LEAD 160G(TA)	L918	6210TCE001G	FILTER,EMC HH1M3216501
FILTER & CRYSTAL			L919	6210TCE001G	FILTER,EMC HH1M3216501
L1	6210TCE001G	FILTER,EMC HH1M3216501	L920	6210TCE001G	FILTER,EMC HH1M3216501
L101	6210TCE001G	FILTER,EMC HH1M3216501	L922	6210TCE001A	FILTER,EMC HB1S2012080JT
L103	6210TCE001G	FILTER,EMC HH1M3216501	L923	6210TCE001G	FILTER,EMC HH1M3216501
L106	6210TCE001G	FILTER,EMC HH1M3216501	L955	6210TCE001G	FILTER,EMC HH1M3216501
L107	6210TCE001G	FILTER,EMC HH1M3216501	L956	6210TCE001G	FILTER,EMC HH1M3216501
L205	6210TCE001A	FILTER,EMC HB1S2012080JT	L957	6210TCE001G	FILTER,EMC HH1M3216501
L206	6210TCE001A	FILTER,EMC HB1S2012080JT	L957	6210TCE001G	FILTER,EMC HH1M3216501
L207	6210TCE001G	FILTER,EMC HH1M3216501	L958	6210TCE001G	FILTER,EMC HH1M3216501
L2100	6210TCE001A	FILTER,EMC HB1S2012080JT	R2004	6200JB8010L	FILTER,EMC MLB2012091000LN2
L2101	6210TCE001A	FILTER,EMC HB1S2012080JT	R953	6210TCE001G	FILTER,EMC HH1M3216501
			X1	156-A01P	RESONATOR,CRYSTAL HC49U 8.000MHZ
			X301	156-A02X	RESONATOR,CRYSTAL HC49U 27.000MHZ
			X501	6202VDT002J	RESONATOR,CRYSTAL SX1 13.500000MHZ

REPLACEMENT PARTS LIST

LOCA. NO	PART NO	DESCRIPTION	LOCA. NO	PART NO	DESCRIPTION
X601	156-A02M	RESONATOR,CRYSTAL HC49U 18.432MHZ			
X901	6202VDT002B	RESONATOR,CRYSTAL SX1 SC14.3MHZ			
MISCELLANEOUS					
F101	0FS6300B84B	FUSE,SLOW BLOW 630MA 250V			
F102	0FF2501A25E	FUSE,FAST BLOW 2500MA 125V			
JA202	6630G15E215	CONNECTOR,DSUB 15P 2.29MM			
P1102	6631V20016G	CONNECTOR ASSEMBLY,14P 2.0MM			
P2000	6631V20016C	CONNECTOR ASSEMBLY,14P 2.0MM			
PA3000	6726VV0006D	REMOTE CONTROLLER RECEIVER,38.0KHZ			
TU101	6700VNF019E	TUNER,TAFHH001P LG NTSC FS			
ACCESSORIES					
A1	3828VA0308X	MANUAL,OWNERS ML012C			
A2	6710V00091L	REMOTE CONTROLLER,ML012C			
A3	6410VUH003A	POWER CORD,PS204001 1800MM			
A4	6634B00043B	ADAPTER,ACDC SAD6012SE 12V 5.0A			
A5	6851V00004D	CABLE ASSEMBLY,AUDIO TO AUDIO 2000MM			
A6	6866VA9001C	CONNECTOR,DSUB 15P SPECIAL KCADM141831			

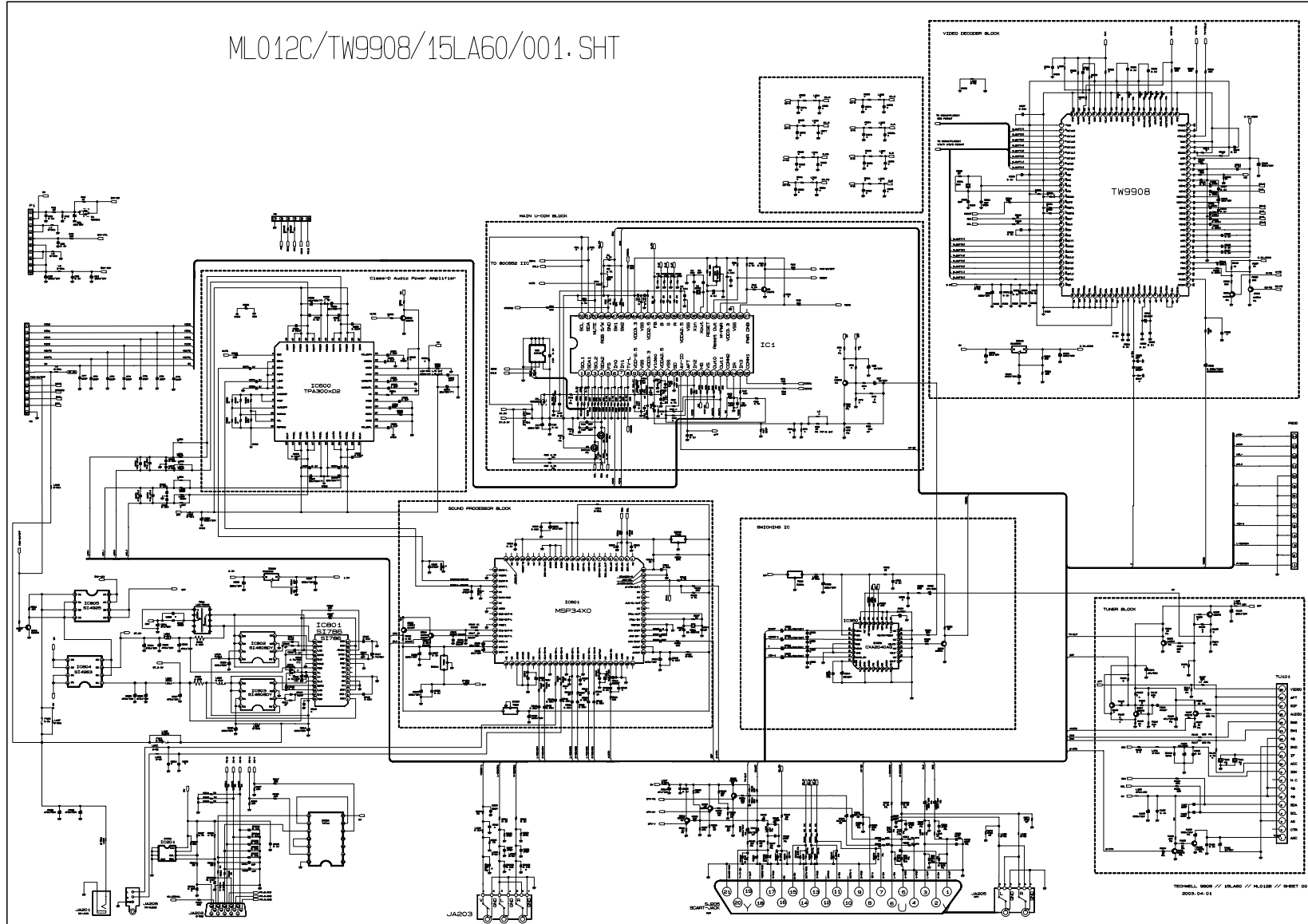


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